



## CRYSTALLIZATION

— Leo Geurts and Lambert Meertens

These four drawings were made from a program to design patterns that combine regularity and irregularity in a natural way. The process is not unlike that of crystallization, where a regular structure grows out of chaos. The program starts by generating a random pattern of black and white squares, and then step by step a specified regularity is imposed upon it. In the upper lefthand corner, for example, the desired regularity was that the color of a square must be the same as the color of its neighbor in any of the four principal directions. This regularity is achieved by determining the color of a square from those of its four neighbors. Color is determined in this way for all squares of the field, taken in a random order. After the first "sweep" over the field, additional sweeps are made, until one of the following conditions is met: (1) none of the squares has changed color; or (2) the number of color changes was greater than that in the previous sweep over the field. Different regularities were imposed on the other three drawings. The program was written in ALGOL 60 and run on an Electrologica X8 computer.

